

# Mineral Industry Surveys

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## MARKETABLE PHOSPHATE ROCK — CROP YEAR 1999

U.S. production of marketable phosphate rock decreased slightly to 42.6 million metric tons (Mt) in Crop Year 1999 (July 1, 1998-June 30, 1999) compared with 43.4 Mt in Crop Year 1998 according to the U.S. Geological Survey (USGS).

The data for this report are collected through monthly and semi-annual surveys of U.S. phosphate rock producers. All 11 companies that produced phosphate rock in the United States participated in the voluntary surveys, representing 100% of the production, sold or used, and value data shown in the tables. Trade data were provided by the U.S. Bureau of the Census and the Moroccan phosphate producer.

Marketable phosphate rock sold or used, including exports, was 43.3 Mt; 2% higher than in Crop Year 1998. Producers stocks decreased 9% nationwide. By region, stocks fell 14% in the Florida-North Carolina region and increased 13% in the Idaho-Utah region. U.S. ending stocks represented slightly less than 2 months of average production in Crop Year 1999. The average value of marketable phosphate rock sold or used in the United States increased to \$29.17 per metric ton (t).

Exports of phosphate rock, as reported by the Bureau of the Census, increased from 236,000 t in Crop Year 1998 to 332,000 t in Crop Year 1999. This was attributed to a mine in Florida becoming a major supplier to an elemental phosphorus plant in the Netherlands. Despite the increase, exports of phosphate rock have reduced substantially over the past five years as producers have switched emphasis to exporting higher value fertilizer materials.

During Crop Year 1999, imports of phosphate rock were estimated at 2.13 Mt, a 24% increase over that of Crop Year 1998. The gain was attributed to expansions in domestic fertilizer production capacity. Import data were estimated based upon data provided to the USGS by the single producer in Morocco and from Census. Much of the import data from Morocco, the major supplier to the United States, were suppressed by Census.

The manufacturing of fertilizers and animal feed supplements accounted for 93% of phosphate rock consumption. The remainder was used to produce elemental phosphorus. Estimated domestic consumption increased 2% to 45.1 Mt, compared with 44.3 Mt in Crop Year 1998.

TABLE 1  
SALIENT U.S. PHOSPHATE ROCK STATISTICS 1/

(Thousand metric tons and thousand dollars, unless otherwise specified)

	Crop year 2/	
	1998	1999
Mine production (crude ore)	162,000	152,000
Marketable production	43,400	42,600
P <sub>2</sub> O <sub>5</sub> content	12,600	12,400
Value	\$1,100,000	\$1,250,000
Average, dollars per metric ton 3/	\$25.36	\$29.17
Sold or used by producers 4/	42,600	43,300
P <sub>2</sub> O <sub>5</sub> content	12,400	12,600
Value 5/	\$1,100,000	\$1,320,000
Average, dollars per metric ton	\$25.91	\$30.43
Exports 6/	236	332
P <sub>2</sub> O <sub>5</sub> content	NA	NA
Value	NA	NA
Average, dollars per metric ton 7/	\$50.61	\$36.21
Imports for consumption e/ 8/	1,720	2,125
C.i.f. value e/	\$78,700	\$126,000
Average, dollars per metric ton	\$45.76	\$59.38
Consumption e/ 9/	44,300	45,100
Stocks, June, 30: Producers	7,520	6,840

e/ Estimated. NA Not available.

1/ Data are rounded to three significant digits; except prices.

2/ July 1-June 30.

3/ Average value is based on sold or used values.

4/ Includes domestic sales and exports.

5/ Total value of all domestic and export sales.

6/ Source: Bureau of the Census.

7/ Value of exports reported to the U. S. Geological Survey by companies.

8/ Some phosphate rock import tonnage and value were suppressed by the Bureau of the Census. Estimates are based on reports from the Bureau of the Census and the Moroccan phosphate rock producer.

9/ Expressed as sold or used plus imports minus exports.

TABLE 2  
PRODUCTION OF PHOSPHATE ROCK IN THE UNITED STATES, BY REGION 1/

(Thousand metric tons and thousand dollars)

Period and region	Mine production (Crude ore)		Marketable production			Ending stocks, rock
	Rock	P2O5 content	Beneficiated		Value 2/	
			Rock	P2O5 content		
Crop year 1998	162,000	16,400	43,400	12,600	1,100,000	7,520
Crop year 1999:						
July-December, 1998:						
Florida and North Carolina	80,400	5,210	19,500	5,650	497,000	6,540
Idaho and Utah	5,020	870	2,870	862	57,600	1,380
Total	85,400	6,080	22,300	6,510	554,000	7,920
January-June, 1999:						
Florida and North Carolina	63,800	4,270	17,400	5,110	616,000	5,320
Idaho and Utah	3,150	700	2,850	743	77,600	1,510
Total	66,900	4,970	20,300	5,860	694,000	6,840
Grand total	152,000	11,100	42,600	12,400	1,250,000	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Calculated value based on the sold or used value.

TABLE 3  
PHOSPHATE ROCK SOLD OR USED BY PRODUCERS  
IN THE UNITED STATES, BY GRADE 1/

(Thousand metric tons and thousand dollars)

Period and grade (percent BPL 2/ content)	P <sub>2</sub> O <sub>5</sub>		Value 3/
	Rock	content	
Crop year 1998	42,600	12,400	\$1,100,000
Crop year 1999:			
July-December 1998:			
60 to less than 66	16,400	4,800	410,000
Other 4/	5,500	1,560	138,000
Total	21,900	6,360	548,000
January-June 1999:			
60 to less than 66	16,600	4,910	633,000
Other 4/	4,760	1,280	137,000
Total	21,400	6,200	770,000
Grand total	43,300	12,600	1,320,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate)= 0.458% P<sub>2</sub>O<sub>5</sub>

3/ F.o.b. mine.

4/ Includes less than 60% and greater than 70% BPL content.

TABLE 4  
PHOSPHATE ROCK SOLD OR USED BY  
PRODUCERS IN THE UNITED STATES,  
BY USE 1/

(Thousand metric tons)

Period and use	P <sub>2</sub> O <sub>5</sub>	
	Rock	content
Crop year 1998	42,600	12,400
Crop year 1999:		
July-December, 1998		
Domestic:		
Agricultural	20,500	5,990
Industrial	W	W
Subtotal	W	W
Exports: 2/	W	W
Total	21,900	6,360
January-June, 1999		
Domestic:		
Agricultural	20,000	5,840
Industrial	W	W
Subtotal	W	W
Exports: 2/	W	W
Total	21,400	6,200
Grand total	43,300	12,600

W Withheld to avoid disclosing company proprietary data.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Exports reported to the U.S. Geological Survey by companies.

TABLE 5  
VALUE OF U.S. PHOSPHATE ROCK, BY GRADE

(Dollars per metric ton, f.o.b. mine)

Grade (percent BPL 1/ content)	Crop year 1998			Crop year 1999		
	Domestic	Export	Average	Domestic	Export	Average
70 to less than 72	W	W	W	W	W	W
66 to less than 70	30.59	W	31.07	26.31	W	26.89
60 to less than 66	25.29	W	25.33	31.59	W	31.60
Weighted average 2/	25.80	50.61	25.91	28.34	36.21	30.43

W Withheld to avoid disclosing company proprietary data.

1/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate)=0.458% P<sub>2</sub>O<sub>5</sub>.

2/ Includes less than 60% and greater than 72% in addition to the grades listed.